

Attorney Docket No. 128321.00101

AMENDMENTS TO THE CLAIMS

1. (canceled)
2. (canceled)
3. (canceled)
4. (canceled)
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21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

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26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (canceled)

32. (previously presented) A method of making nanocrystals comprising:

conditioning nanocrystal forming reagents in a flow path, said flow path including one or more fluidly connected microfluidic modules for making nanocrystal product in a flow process, the flow path in each module is a channel formed in a first substrate, said channel in thermal contact with one or more independently controlled heat exchangers and mixing structures along the flow path to condition the nanocrystal forming reagents in the flow path; each module having an inlet in the flow path for receiving the nanocrystal forming reagent fluid and an outlet in the flow path for removing conditioned reagent fluid from the module, each said inlet and outlet capable of forming a fluid tight seal with one or more controlled fluid delivery devices; and

monitoring a detectable property of said nanocrystal product or reagent in a portion of the flow path and adjusting a controllable heat exchanger, a fluid

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delivery device , reaction time, or a combination of these to maintain the detectable property of the nanocrystal product in a pre-determined range.

33. (previously presented) The method of claim 32 wherein the nanocrystals forming reagents are fluorescent nanocrystal forming reagents.
34. (previously presented) The method of claim 32 wherein the mixing structures within the flow path divide and recombine the fluid flow of the nanocrystal forming reagents.
35. (previously presented) The method of claim 32 further including the act of purifying the conditioned nanocrystal forming reagents in the flow path.
36. (previously presented) The method of claim 32 comprising one or more flow paths.
37. (previously presented) A method of purifying nanocrystals comprising:

providing nanocrystals in a fluid into the flow path of a microfluidic module having a separation device in the flow path of said microfluidic module, and

separating an impurity from said nanocrystals within said microfluidic module.
38. (previously presented) The method of claim 37 wherein the impurity is a coordinating ligand, a solvent, nanocrystal forming reagents, particles, and combinations of these.
39. (previously presented) The method of claim 37 further comprising the act of providing a second fluid to the flow path from one or more ports along the flow path.
40. (previously presented) The method of claim 37 the separated impurity is a first ligand attached to the nanocrystals that is exchanged for a second ligand to be attached to the nanocrystals in the fluid.